

ABSTRACT

In polypyrrole films obtained by a process for producing polypyrrole films comprising the steps of forming polypyrrole layers on working electrodes by electrochemical polymerization methods using pyrroles and /or 5 pyrrole derivatives, followed by stripping off said polypyrrole layers, wherein said electrochemical polymerization methods use electrolytes including organic compounds comprising at least one bond or one functional group of ether bond, ester bond, carbonate bond, hydroxyl group, nitro group, sulfone group, and nitryl group and / or halogenated hydrocarbon as 10 solvents and wherein said electrolytes include anions including trifluoromethanesulfonate ion and / or plural of fluorine atoms which bond to central atom and said working electrodes are metal electrodes, conductivity can be stably sustainable in the presence of oxygen and are excellent in mechanical strength.